

## Economic Challenges

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February 2022

**About the Course** The course targets students who have completed their mandatory training in microeconomics, macroeconomics and mathematics (i.e., students in the second half of their BA studies) and who are interested in modern macroeconomic theory. The objective of the course is threefold: Students should learn to think analytically, like economists do; they should understand select tools of modern macroeconomic theory; and they should learn to apply the tools and the economic reasoning to frame and understand policy issues in Switzerland and beyond.

**Topics** In the first lecture we have decided to focus on two topics:

- A. Inflation, government debt, and monetary policy; as well as
- B. income distribution and inequality.

**Schedule** In lectures two to eight (February 28–April 11) we will cover some macroeconomic theory to analyze the two topics. In parallel, groups of three students each will explore specific questions and prepare short notes and presentations. Starting on April 25 the groups will present their findings in class.

**Questions** We will focus on the following questions:

- A. Inflation, government debt, and monetary policy:
  - i. Which major components enter into the official price index in CH and in the EU, with which weights? What differences can explain that we currently observe different inflation rates? What inflation rates should we expect in the future, based on plausible arguments or simple time series models?
  - ii. What is the maturity structure of government debt (held by the private sector)? How does it look like in CH and/or other countries? By how much does the market value of outstanding government debt change when inflation and nominal interest rates change? Why is this important? How would you advise the treasury to structure new debt issuance?
  - iii. Suppose that inflation in CH surprisingly rises by one percent, either temporarily (for a year) or permanently. Who would benefit and who would lose, based on plausible arguments and simple models? By how much? [For inspiration: [Doepke and Schneider \(2006\)](#).]

- iv. What is “QE,” and what is “a helicopter drop” of money? What are the consequences of central bank purchases of government debt for the consolidated government budget, based on a simple model?<sup>1</sup> What is seignorage; how large is it when central bank money (e.g., reserves) pays the market rate of interest? Does it make sense when some politicians push the SNB to distribute more profits? [Unifying topic: The role of government debt and central bank money in the consolidated government budget constraint.]
- v. How do central banks control inflation? Provide a simple unified analytical framework, for instance based on [Castillo-Martinez and Reis \(2019\)](#).
- vi. What are time inconsistency problems in monetary policy? What are the sources and possible solutions? What are the key mechanisms in the [Barro and Gordon \(1983\)](#) model?

#### B. Income distribution and inequality:

- vii. How is income and wealth inequality measured? What are good and bad measures? Why might income and wealth inequality be of secondary importance for equity but important for political economy reasons? What is the empirical evidence on inequality in CH over the last few decades?
- viii. What would be the likely macroeconomic effects of a guaranteed monthly minimum income of XXX CHF in CH? Develop a simple analytical framework and quantify them.
- ix. What theories help us think about intergenerational mobility and the persistence of inequality across generations? Provide an analytical overview. What is the empirical evidence on mobility for CH and/or other countries? [Possible starting point: NBER working papers #29760 and #29761.]
- x. Should robots that replace workers be taxed? Review the literature for some arguments and summarize them by means of an analytical framework. [Possible starting point: Recent NBER working papers on the topic.]

**Guidelines** Each group composes a note and presents the note, and possibly additional findings, in class. The quality of the note and the presentation are graded. Instructions:

- The note should have 3–5 pages, the shorter the better. Think of it as a briefing note for a smart reader who knows everything you know (or more) about general economics but not about the specific topic.

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<sup>1</sup>Possible questions could include: How different or not are the consequences of the central bank purchasing government debt from banks and (i) permanently holding it (rolling it over at maturity) vs. (ii) cancelling the debt? How different or not are the consequences of (i) the central bank issuing money as a transfer to the general public vs. (ii) the government making a deficit-financed transfer to the general public with the central bank purchasing the debt and holding it permanently?

The note should address the questions and points raised in a unified and consistent manner. Language is key: Grammar, wording, terminology should be correct, clear, consistent. You may write/present in German or English (preferred). Include equations and figures whenever it is helpful, but choose them wisely. Emphasize analytical rigor.

Models or analytical frameworks are sets of equations that include variables (representing the objects we would like the model to explain) and parameters (objects that we take as given, for instance because the model would become too complex otherwise). To explain the effect of a parameter on an endogenous variable means to formally characterize the effect (e.g., by means of comparative statics) and to provide economic intuition for it.

When your note includes equations I strongly suggest that you work with LaTeX.<sup>2</sup> In any case, focus on content rather than fancy layout.

- The presentation should last roughly 20 minutes. You may use whatever medium you prefer. Focus on content rather than fancy layout.<sup>3</sup> The presentation is followed by Q&A and a discussion.
- E-mail me the note one week before the scheduled date of the presentation, at the latest. I will provide feedback and might ask for a revision. The final draft has to be e-mailed to me *and* distributed online 24 hours prior to the presentation, at the latest, such that all course participants have a chance to read the note before the presentation.
- The grade depends on the quality of the final draft; how many revisions are necessary and how extensive they are; whether deadlines have been kept; the quality of the presentation; and the extent to which the group can respond to questions from the audience.

**Literature** If you need a textbook to get started on some topics you might want to consult [Niepelt \(2019\)](#) or a similar text.

## References

Barro, R. J. and Gordon, D. B. (1983). Rules, discretion, and reputation in a model of monetary policy, *Journal of Monetary Economics* **12**: 101–121.

Castillo-Martinez, L. and Reis, R. (2019). How do central banks control inflation? A guide for the perplexed. Unpublished, LSE.

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<sup>2</sup>This allows you to focus on content rather than layout and it nevertheless results in a more appealing end product.

<sup>3</sup>No presentations with many colors and fancy effects unless you have good reasons.

Doepke, M. and Schneider, M. (2006). Inflation and the redistribution of nominal wealth, *Journal of Political Economy* **114**(6): 1069–1097.

Niepelt, D. (2019). *Macroeconomic Analysis*, MIT Press, Cambridge, Massachusetts.